Diabetes in pregnancy: ethical considerations

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Introduction

Gestational diabetes mellitus (GDM) is a form of diabetes that occurs in pregnancy and results in significant adverse effects for mother and child, both in the short and long term. It is associated with an increased rate of foetal malformations as well as risks for foetal macrosomia, birth trauma and neonatal hypoglycaemia. Women with a previous history of unexplained stillbirth have a high incidence of GDM.

In addition to these risks, there is evidence that children of diabetic mothers have a predisposition to a number of diseases later in life but there have been no intervention studies to show that these can be prevented. On the other hand, pregnancy may worsen the progression and prognosis of the condition as GDM includes women with pre-existing but previously unrecognised diabetes. It is therefore imperative that a woman who presents with GDM is counselled extensively during pregnancy in order that she can make an informed choice in the management of her pregnancy.

Management of a diabetic woman has two main objectives, namely to maintain maternal well-being by tight metabolic control and prevention of complications in the woman, and to prevent the adverse effects of the disease on the foetus. When an ill foetus needs to be delivered prematurely, one may need to consider the allocation of scarce resources. This article will discuss the fiduciary needs to be delivered prematurely, one may need to consider the allocation of scarce resources. This article will discuss the fiduciary duties and ethical obligations of the healthcare practitioner with emphasis on the management of a diabetic woman where there is conflict between the well-being of the woman and that of the foetus.

Prevention of GDM

The recurrence of GDM in subsequent pregnancies is low. While the reason for this is not known, it may be related to variations in placental hormone production or an alteration in the maternal lifestyle before conception. Glueck et al. have demonstrated a 10-fold reduction in the development of GDM in women with polycystic ovarian syndrome treated with metformin, compared to no treatment.

Management of GDM has implications for the child both in the immediate postpartum short term and in the long term. Failure to prevent development of GDM may lead to macrosomia and adverse outcomes of pregnancy, as discussed below, and this may have ethical implications for the mother, the foetus and the child. Recent studies on children of both type 1 and type 2 diabetic mothers have shown that there is an increased risk of glucose intolerance, childhood obesity and other metabolic disturbances in adolescence.

Macrosomia

This is associated with an increased incidence of operative and traumatic delivery and with childhood and adult obesity. An informed woman may request delivery by caesarean section (CS) to avoid a difficult and traumatic delivery. While the healthcare practitioner should respect the woman’s autonomy, he/she would also be ethically bound to inform the woman about the risks of delivery by CS, and weigh the potential harm to the woman against potential benefits to the foetus. DM per se is not an indication for CS and where there is no medical reason for CS, maternal request for CS is not advisable. A report by the National Institute of Clinical Excellence (NICE) stated that the relative risk of maternal death was 4.9 (95% CI: 3.0–8.0) for CS. This amounted to 0.82 maternal deaths/1 0000 CSs, as opposed to 0.17 maternal deaths/10 000 vaginal births.

There is no evidence that good glycaemic control reduced the CS rate or the risk of shoulder dystocia. Therefore it may be difficult to decline to do a CS when a woman requests it for fear of labour and a potentially difficult labour and birth trauma. Under these circumstances, it would be advisable to offer counselling to help her address her fears in a supportive manner because this helps reduce her fears of labour pains and results in a shorter labour. A policy of induction of labour at 38 weeks reduces the incidence of large-for-gestational-age babies, neurological injuries from birth trauma and probably unexplained late stillbirths.

Congenital abnormalities

The overall rate of congenital abnormalities is double the background rate and there is a three-fold increase in the rates of neural tube defects, skeletal abnormalities and congenital heart defects. In women with poor glycaemic control, the risk is as high as 25%. The patient has a right to know what the implication of a positive screening test is, and her right to decide outweighs what the healthcare practitioner may advise.

Before undertaking any screening test, the patient should be properly counselled by presenting her with all available relevant information and what consequent action is available in case of an abnormal test. Effective counselling should be done before and after the test, providing sufficient information to enable rational decision-making. Screening for genetic diseases with possibly invasive tests on the woman should be discussed early in pregnancy so that the woman can exercise her options.

Where the diagnosis of a genetic abnormality is made, the woman may want to terminate the pregnancy and the attending physician should not impose his/her beliefs on the patient. While the physician may be obliged to exercise beneficence-based obligations to the foetus by opting for a chance at life, the woman may also have an obligation not to bring a child into the world that may not lead a normal life, and may therefore opt for a termination of pregnancy. In so doing she will be exercising her autonomy, which should be respected at all times.

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